

## ABSTRACT OF THE DISCLOSURE

An inorganic fluorescent material for solid-state light source is associated with a GaInN heterojunction blue solid-state light source to form a white light source. The fluorescent material is represented by the general formula of

5  $Y_{1-x-y-z-q}, Gd_x, Dy_y, Yb_z, Er_q, Ce_p)_\alpha (Al_{1-n-m-k}, Ga_n, Sc_k, In_l)_\beta O_{12}$ , wherein  $\alpha$  is in the range of 2.97-3.02,  $\beta$  is in the range of 4.98-5.02,  $x$  is in the range of 0.2-0.65,  $y$  is in the range of 0.001-0.05,  $z$  is in the range of 0.01-0.05,  $q$  is in the range of 0.001-0.05,  $p$  is in the range of 0.015-0.1,  $k$  is in the range of 0.01-0.6,  $n$  is in the range of 0.01-0.45, and  $l$  is in the range of 0.01-0.1. The short-wavelength light emitted from the GaInN

10 heterojunction blue solid-state light source is mixed with a wide-bandwidth light emitted from the fluorescent material to generate a mixed light of a wavelength of about 535nm–590 nm.